

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Kazunori IWAMOTO et al.

Application No.: 09/885,012

Filed: June 21, 2001

For: MOVING MECHANISM IN EXPOSURE
APPARATUS, AND EXPOSURE
APPARATUS HAVING THE SAME

Examiner: D. Ben Esplin

Group Art Unit: 2851

April 4, 2003

Commissioner for Patents
Washington, D.C. 20231

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APR -4 2603
TECHNOLOGY CENTER 28000

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

Further to the Information Disclosure Statement filed October 10, 2001, in compliance with the duty of disclosure under 37 C.F.R. § 1.56 and in accordance with the practice under 37 C.F.R. §§ 1.97 and 1.98, the Examiner's attention is directed to the documents listed on the enclosed PTO-1449 form. Copies of the listed documents are also enclosed.


U.S. Patent No. 5,996,437 was cited during the prosecution of a related foreign patent application. For the Examiner's convenience, also enclosed are copies of the Office Action and its translation, which cited the noted patent.

Applicants request that the above information be considered by the Examiner and that a copy of the enclosed PTO-1449 form be initialed and returned indicating that such information has been considered.

No fee is believed due with the filing of this paper. Nevertheless, the Commissioner may charge Deposit Account No. 06-1205, should any fee be due for filing this paper.

Applicants' undersigned attorney may be reached in our Washington D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



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SEW/eab

經濟部智慧財產局專利核駁審定書

受文者：佳能股份有限公司（代理人：林志剛先生）

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發文日期：中華民國九十二年二月十七日

發文字號：（九二）智專二（一）04077字

第〇九二〇一四五〇二〇號

一、申請案號數：〇九〇一一五一九二

專利分類IPC(7)……H01L 21/30

二、發明名稱：曝光裝置中之移動機構及具有此移動機構之曝光裝置

三、申請人：

名稱：佳能股份有限公司

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四、專利代理人：

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五、申請日期：九十年六月二十二日

六、優先權項目：

I 2000/06/23 日本2000-190140



七、審查人員姓名：莊振益 委員

八、審定內容：

主文：本案應不予專利。

依據：專利法第二十條第二項。

理由：

(一) 本案「曝光裝置中之移動機構及具有此移動機構之曝光裝置」，其技術主要揭露一種移動機構，其具有一引導表面；一可移動部份，可沿著該引導表面移動；及一致動器，具有設置在該可移動部份側的一可移動元件，以及至少二定子該二定子互相分開，且藉著該可移動部份被驅動時所產生的一反作用力而被移動者。

(二) 經查1999/12/07公告之美國專利第五九九六四三七號（引證附件）即揭露有可在X-Y平面上獨立沿引導表面移動，且由電磁鐵及線性驅動馬達分別控制之曝光裝置之移動機構，與本案所揭露的移動機構技術特徵相同，因此本案為熟悉該項技術者能由引證案所揭露之技術而輕易完成者。

(三) 綜上所述，本案係運用申請前之技術或知識，而為熟悉該項技術者所能輕易完成者，不具進步性。

(四) 另予指明，所請第8、11、21、24、25項未載明構成及其實施之必要技術內容、特點，請修正。

據上論結，本案不符法定專利要件，爰依專利法第二十條第二項，審定如主文。

局長 蔡練生

依照分層負責規定授權單位主管決行

如不服本審定，得於文到之次日起三十日內，備具再審查理由書一式二份及規費新台幣陸仟元整（專利說明書及圖式合計在五十頁以上者，每五十頁加收新台幣五百元，其不足五十頁者以五十頁計），向本局申請再審查。

[TRANSRATION]**Syllabus:**

This application is rejected.

Ground:

Article 20, Paragraph 2 of the Patent Law.

Explanation:

1. The present invention provides a moving mechanism including a guide surface, a movable portion being movable along the guide surface, and an actuator having a movable element disposed at the movable portion side and at least two stators, the stators being separated from each other and being moved by a reaction force produced as the movable portion is driven.
2. It is found that USP5996437 (hereinafter referred to as the cited reference), published on December 7, 1999, disclosed a moving member for an exposure apparatus, which moves along a guide surface on an x-y plane and is controlled respectively by magnets and linear-driven motors. The moving member of the cited reference is the same as the moving mechanism of this invention in technical features, and thus, this invention can be easily achieved by means of the technique disclosed in the cited reference by those skilled in the same field.
3. Summing up the above, this invention simply utilizes prior art or knowledge in such a manner that it can be easily achieved by those skilled in the same field, and thus lacks inventive steps.
4. In addition, Claims 8, 11, 21, 24 and 25 in the present application fail to specify constituents and technical contents and characteristics required for implementation of the claimed invention, and should be amended.

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In conclusion, the present application fails to meet the essential requirements for an invention patent and is hereby rejected pursuant to Article 20, Paragraph 2 of the Patent Law.

[TIPLO's Remarks]

1. Digest of the Notice

The present application is rejected as being unpatentable over USP5996439 under the second paragraph of Article 20 of the Patent Law, as quoted below.

2. Related Legal Provisions

Article 20 of the Patent Law (emphasis added)

Any industrially applicable invention may be granted patent in accordance with this Law if it is not under any of the following circumstances:

- (1) *Prior to applying for patent, it has been published or publicly used; provided that this restriction shall not apply if the publication or public use is made for the purpose of research or experiment and a patent application has been filed within six months from the date of such publication or public use;*
- (2) *Prior to applying for patent, it has been displayed in an exhibition; provided that this restriction shall not apply if it is displayed in an exhibition under the auspices of the government or officially approved, and a patent application has been filed within six months from the date of such exhibition.*

Despite the absence of the circumstances mentioned in the preceding paragraph, an invention shall still not be granted patent if prior art or knowledge is employed to the invention in a way that people skilled in the same art may easily complete the invention.

Applicant who asserts the situation set forth in the proviso of Paragraph 1(1) or Paragraph 1(2) shall state the facts and the day/month/year of such facts upon application and submit written evidence to the Special Patent Agency within its designated period of time.

3. Advice

According to the exposure apparatus of this invention, the influence of vibration or swinging motion resulting from the motion of a stage can be reduced, a high precision can be accomplished, and through reduction of the influence, to the floor, of a

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reaction force caused in response to the acceleration or deceleration of the stage, the influence which otherwise is applied to another machine disposed on the same floor, can be reduced. With conventional scanning exposure apparatuses, the above-mentioned efficacy cannot be achieved.

The cited reference (USP5996437), entitled "Precision Motion Stage with Single Guide Beam and Follower Stage," was filed by Nikon Corporation on February 11, 1997. According to a first embodiment of the cited reference, a scanning exposure apparatus comprises a base (12) having a flat and smooth principal surface (12a); two parallel fixed guides (18a, 18b) spaced apart in the Y-direction and mounted on the surface (12a) of the base (12); a movable beam (20) having a guide surface extending in the Y-direction; and upper and lower stages (22a, 22b) movable in the Y-direction along the guide surface of the beam (20); wherein the guide surface (180a) of the guide (18a) guides an air bearing/vacuum structure (100) that is fixed to one end of the beam (20) so as to move the beam (20) in the X-direction, and the fixed guide (18a) and the beam (20) are driven by two linear motor systems respectively.

At the present stage, in order to proceed with the present application for examination, please compare in detail the present application with the cited reference and provide us with arguments regarding the technical innovations and characteristic features of the present application with make it distinguishable from and hence patentable over the cited reference. We need your comments in this aspect.

Further, as to the examiner's objection to Claims 8, 11, 21, 24 and 25, it seems that the examiner does not accept the format of these claims, but according to the official "Manual of Patent Examination Procedure," such a claim format should be acceptable. Thus we will argue against this matter in the following response to the I.P. Office. Alternatively, for example, Claim 8 can be revised by replacing "a moving mechanism as recited in Claim 1" with the full recitation in Claim 1, thereby explicitly specifying constituents and technical contents and characteristics required for implementation of the claimed invention. In this case, each of Claims 24 and 25 will be divided into 10 claims. According to our experience, if these claims are revised as mentioned above, these claims showed be accepted without being objected to informality. Please advise us of this matter.



Attorneys-at-Law

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Timely receipt of your instructions would be greatly appreciated.

Handled by: Peter C Kuo

Supervisor: C. H. Li

DDN: 886-2-2508-6619

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